ABSTRACT

A heterojunction bipolar transistor (HBT), and manufacturing method therefor, comprising a semiconductor substrate having a collector region, an intrinsic base region of a compound semiconductive material over the collector region, an extrinsic base region, an emitter structure, an interlevel dielectric layer over the collector region, extrinsic base region and emitter structure, and connections through the interlevel dielectric layer to the base region, the emitter structure, and the collector region. The emitter structure is formed by forming a reverse emitter window over the intrinsic base region, which subsequently is etched to form an emitter window having a multi-layer reverse insulating spacer therein.